

*REMARKS/ARGUMENTS**The Pending Claims*

Claims 1-4, 6, 8, and 15-24 are pending. Claims 1-4, 6, and 8 are currently being examined and are directed to a magnetic carrier for a biological substance, such as a nucleic acid. Claims 15-24 are currently withdrawn.

*Amendments to the Claims*

Claim 1 has been amended to recite a coercive force of 2.39-11.94 kA/m, as supported by the specification at, for example, page 11, lines 11-14. The coercive force recited in claim 3 has been deleted as duplicative. Claims 9-13 have been canceled. No new matter has been added by way of these amendments.

*Summary of the Office Action*

Claims 1-4, 6, and 8-13 are rejected under 35 U.S.C. § 103(a), as allegedly obvious in view of U.S. Patent 5,804,357 (Yamanouchi et al.). Reconsideration of this rejection is hereby requested.

*Discussion of the Obviousness Rejection*

Claims 1-4, 6, and 8-13 allegedly are obvious over Yamanouchi et al. According to the Examiner, Yamanouchi et al. discloses magnetic particles characterized by particle size, saturation magnetization, and coercive force properties which fall within the claimed ranges (col. 22, line 43, through col. 23, line 12) and are surface-treated with silica and/or alumina (col. 23, lines 10-12). Further, the Examiner alleges that the magnetic particles of Yamanouchi et al. inherently function like the claimed magnetic carrier because the magnetic particles of Yamanouchi et al. and the claimed magnetic carrier have the same properties (e.g., saturation magnetization, coercive force ranges, and size range). The Examiner acknowledges that Yamanouchi et al. fails to disclose the exact aspect ratio, silica coating proportion, and aluminum content recited in the pending claims. However, the Examiner asserts that it would have been obvious for one of skill in the art to determine the claimed ranges because the Yamanouchi reference allegedly teaches that magnetic particles can be

surface-treated with silica and/or alumina. According to the Examiner, if the art discloses general conditions of a claim, then discovering the optimum or workable ranges involves only routine skill in the art.

Insomuch as claims 9-13 have been canceled, the following discussion pertains to claims 1-4, 6, and 8 (and withdrawn claims 15-24).

Yamanouchi et al. discloses an image-forming method on a silver halide light-sensitive material (abstract). In this method, magnetic particles are fixed on a film, and the data are recorded on the particles using a magnetic head. It is particularly important for a magnetic particle in such method to have a high coercive force, because the recorded data need to be stored as magnetic information on the particle. When the coercive force of the magnetic particle is too low, the recorded data are easily deleted. When the coercive force of the magnetic particle is too high, input is not possible in some systems. Therefore, a coercive force range of 200-2000 oersted is specifically defined (col. 23, lines 5-10). Since 200-2000 oersted is equivalent to 15.92-159.2 kA/m, the coercive force of the magnetic particle disclosed in Yamanouchi et al. is clearly outside of the claimed range of 2.39-11.94 kA/m in the present invention.

Since Yamanouchi et al. does not disclose the same coercive force as recited in the pending claims, it cannot be said that the magnetic carrier disclosed therein inherently functions like the claimed magnetic carrier.

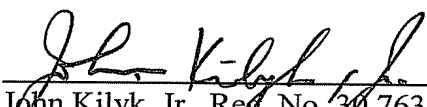
As discussed above, Yamanouchi et al. teaches using the magnetic particles for a recording material by fixing them on a film, but does not disclose collecting magnetic particles in a liquid by a magnetic field or redispersing the magnetic particles by removing the magnetic field. For the magnetic particle of Yamanouchi et al., there would have been no benefit to modify the range of coercive force to arrive at the present invention, since Yamanouchi et al. teaches away from a coercive force lower than 200 oersted (15.92 kA/m). Use of a magnetic particle having a coercive force in the range recited in the pending claims results in erasure of the recorded data. Thus, Yamanouchi et al. does not provide a motivation to one of ordinary skill in the art to modify the disclosed particle to provide the inventive magnetic carrier.

Based on the foregoing, it is clear that Yamanouchi et al. does not disclose explicitly or inherently all the elements of pending claims 1-4, 6, and 8 (or withdrawn claims 15-24). Moreover, Yamanouchi et al. teaches away from lowering the coercive force to the claimed range, and thus does not provide a motivation to the ordinarily skilled artisan to arrive at the claimed invention. As a result, the subject matter of claims 1-4, 6, and 8 (and withdrawn claims 15-24) is not obvious in view of Yamanouchi et al., and this rejection should be withdrawn.

### *Conclusion*

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

  
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Date: July 19, 2007